

REMARKS

I. Status of the Claims

Claims 2-5 and 7 are herein cancelled without prejudice or disclaimer.

Claims 1 and 6 are herein amended. No new matter is added.

Claims 1 and 6 are pending in the application.

II. Claim Rejections - 35 USC § 102

The rejection of claims 1 and 6 under 35 USC § 102(b) as being anticipated by Matouka *et al.* (U.S. Patent No. 5,170,676, "Matouka") is traversed.

Applicants disclose a radially deformable slip plate having a centrally located circular opening formed by a radially deformable spring member disposed on a center side of the slip plate. The inner diameter of the radially deformable spring member of the slip plate is slightly smaller than the diameter of the shaft of a gear which is located in the circular opening. Thus, the slip plate can engage the shaft. The slip plate can be selectively released from engaging the shaft by increasing the diameter of the radially deformable spring member. With Applicants' invention, during assembly, the slip plate can be easily inserted into the gear train assembly. Referring to figure 2, the flange portion 25b is contracted in the radial direction, is passed through the inner periphery of the slip plate, and is then released to attach the slip plate to the driven gear 16. Thus, the shaft portion 25a engages the pinion 17 through the slip plate 18 and the driven gear 16 is concentrically coupled with the pinion 17 through the slip plate 18.

In Matouka, the outer periphery of spring 62 engages an inner periphery of the groove 64 of ring 60. This corresponds to the friction transmitting portion of the present invention. However, the diameter of the spring 62 is larger than the groove 64 (column 3, line 67). Therefore, when assembling the gear train, the spring 62 is first compressed and then expanded into the groove 64 (column 3, line 68 - column 4, line 2). Thus, the spring 62 engages the groove 64 with a radial outward force. Spring 62 has the shape of the letter "C". As such, the spring can be deformed only in the radial inward direction, and the restoring force is a radial outward force. Therefore, with Matouka, the spring 64 cannot be used to selectively engage a first shaft to another shaft. By urging the spring to move in a radial inward direction, the spring could engage a shaft located within the "C", but it would no longer engage the groove 64.

Applicants disclose a slip plate (*see* figure 4) for selectively coupling a first rotating member to a second rotating member. The slip plate includes an annular member located around the outer periphery of the slip plate and a pair of arch members located inward of the annular member. The arch members are attached to the annular member with a pair of bridge members. Slits are located between the annular member and the arch members. Clearly, the slip plate disclosed by Applicants is totally different than the "C" shape spring disclosed by Matouka. Returning to Applicants' invention, in operation, when a radial force is applied to the arch members of the slip plate, the bridge members flex and the arch members deform radially. Thus, the arch members can expand or contract in the radial direction. By locating a shaft in the circular opening D_s between the arch

members of the slip plate of figure 4, the slip plate can selectively engage a shaft located between the arch members with a member which is always coupled to the slip plate.

Matouka discloses in figure 10 a "C" shaped spring member fabricated from a rectangular cross sectional rod of spring steel which, in its pre-installed free shape is shaped like the letter "C" with a gap of approximately 80 degrees and a diameter which is larger than the groove 64 in the hub 60. Referring to column 4, lines 2-31, the spring always couples the hub 70 to the outer ring 60 until the torque of the hub exceeds a predetermined value, at which time the spring then frictionally slides with respect to the ring in a continually contacting manner to limit the transmitted torque between the two to a safe value. Thus, in Matouka, the hub and the outer ring are always coupled together. The spring is used only to limit the torque between the hub and the outer ring. The spring can not be used to selectively couple the hub to the outer ring.

In figure 8, Matouka discloses a daisy-wheel type of spring which cooperates with a daisy-wheel hub for limiting the torque between the hub and the outer ring as noted above. It is never used to selectively couple the hub to the outer ring. Matouka neither discloses nor suggests the structure of a slip plate having an annular member located around the outer periphery of the plate, a spring member located inboard and spaced apart radially from the annular member, and the spring member connected to the annular member with arch members for selectively coupling a first rotating member to a second rotating member.

Amended claim 1 now recites the structure of:

...(a) pair of gears are concentrically coupled with each other through a common slip plate; any one of the pair of gears has a hollow portion at a center side of gear, an outer circumference of the slip plate is engaged with an inner periphery of the hollow portion; and the other gear is combined to the slip plate so that the other gear makes a slip motion in a circumferential direction, thereby the friction transmitting portion is interposed between the other gear and the slip plate; wherein

a radially deformable spring portion disposed on a center side of the slip plate, an inner circumference of the spring portion is engaged with an outer circumference of an axis of the other gear by forming so that a radius of the outer circumference of the axis of the other gear is slightly longer than a radius of the inner circumference of the spring portion
(underscoring added for emphasis).

Clearly, as noted above, Matouka neither discloses nor suggests the structure, in combination, of a radially deformable spring portion disposed on a center side a slip plate as is now positively recited in claim 1. For the reasons noted above, it is believed that claim 1 is in condition for allowance. Claim 6 recites the structure of the slip plate and, therefore, for the reasons noted above, also avoids Matouka and is considered to be in condition for allowance.

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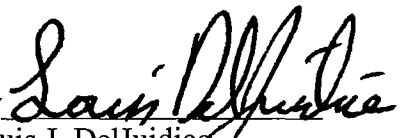
CONCLUSION

In view of the foregoing amendments and remarks, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

If the Examiner believes that any remaining issues can be resolved through a Supplemental Amendment or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated.

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Respectfully submitted,

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